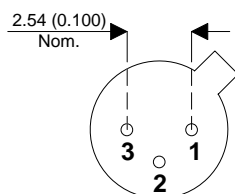
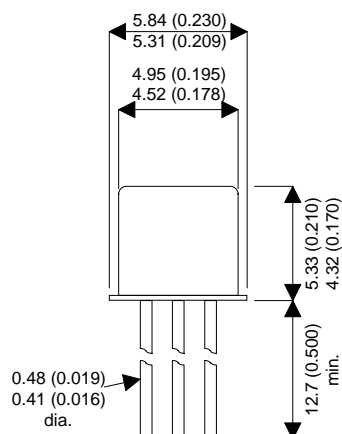


MECHANICAL DATA

Dimensions in mm (inches)



TO18

Underside View

PIN1 – EMITTER PIN 2 – BASE PIN 3 – COLLECTOR

PNP SILICON TRANSISTOR

FEATURES

- SILICON PNP TRANSISTOR
- HIGH SPEED, LOW SATURATION SWITCH

APPLICATIONS:

GENERAL PURPOSE SWITCHING APPLICATIONS

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

V_{CBO}	Collector – Base Voltage	-12V
V_{CEO}	Collector – Emitter Voltage	-12V
V_{EBO}	Emitter – Base Voltage	-4V
I_C	Collector Current	200mA
P_D	Total Device Dissipation @ $T_A = 25^\circ\text{C}$	360mW
	Derate above 25°C	2.06mW / $^\circ\text{C}$
P_D	Total Device Dissipation @ $T_C = 25^\circ\text{C}$	1.2W
	Derate above 25°C	6.85mW / $^\circ\text{C}$
T_{STG}, T_J	Operating and Storage Temperature Range	-65 to +200 $^\circ\text{C}$

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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Issue 1

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$BV_{CEO(SUS)}$ Collector – Base Breakdown Voltage	$I_C = -10\text{mA}$ $I_B = 0$	-12			V
BV_{CES} Collector – Emitter Breakdown Voltage	$I_C = -10\mu\text{A}$ $V_{BE} = 0$	-12			
BV_{CBO} Collector – Base Breakdown Voltage	$I_C = -10\mu\text{A}$ $I_E = 0$	-12			
BV_{EBO} Emitter Base Breakdown Voltage	$I_E = 100\mu\text{A}$ $I_C = 0$	-4			
I_{CBO} Collector Cut-off Current	$V_{CB} = -6\text{V}$ $T_{amb} = 125^\circ\text{C}$			-10	μA
I_{CES} Collector Cut-off Current	$V_{CE} = -6\text{V}$ $V_{BE} = 0$			-80	nA
I_B Base Current	$V_{CE} = -6\text{V}$ $V_{BE} = 0$			-80	
$V_{CE(sat)}$ Collector – Emitter Saturation Voltage	$I_C = -10\text{mA}$ $I_B = -1\text{mA}$			-0.15	V
	$I_C = -30\text{mA}$ $I_B = -3\text{mA}$			-0.2	
	$I_C = -100\text{mA}$ $I_B = -10\text{mA}$			-0.5	
$V_{BE(sat)}$ Base – Emitter On Voltage	$I_C = -10\text{mA}$ $I_B = -1\text{mA}$	-0.78		-0.98	V
	$I_C = -30\text{mA}$ $I_B = -3\text{mA}$	-0.85		-1.2	
	$I_C = -100\text{mA}$ $I_B = -10\text{mA}$			-1.7	
h_{FE} DC Current Gain	$I_C = -10\text{mA}$ $V_{CE} = -0.3\text{V}$	30			—
	$I_C = -30\text{mA}$ $V_{CE} = -0.5\text{V}$	40		150	
	$I_C = -30\text{mA}$ $V_{CE} = -0.5\text{V}$ $T_{amb} = -55^\circ\text{C}$	17			
	$I_C = -30\text{mA}$ $V_{CE} = -0.5\text{V}$	25			
f_T Current Gain Bandwidth Product	$V_{CE} = -10\text{V}$ $f = 100\text{MHz}$ $I_C = -30\text{mA}$	400			MHz
C_{ob} Output Capacitance	$V_{CB} = -5\text{V}$ $I_E = 0$ $f = 140\text{KHz}$			6	pF
C_{ib} Input Capacitance	$V_{BE} = -0.5\text{V}$ $I_C = 0$ $f = 140\text{KHz}$			6	
t_{on} Turn on Time	$V_{CC} = -2\text{V}$ $I_C = -30\text{mA}$			60	ns
t_{off} Turn off Time	$I_{B1} = - I_{B2} = 1.5\text{mA}$			90	

* Pulse Test: $t_p \leq 300\mu\text{s}$, $\delta \leq 1\%$.